WHAT IS CLAIMED IS:

1. An expandable implantable valve prosthesis, comprising:

a support frame supporting one or more leaflets, each leaflet comprising a biomaterial, the support frame and the one or more leaflets together functional as a valve to restrict blood flow in a first direction when implanted in the vascular vessel; and

wherein the biomaterial is folded over the support frame and attached to itself, thereby securing the one or more leaflets to the support frame.

2. The implantable valve of claim 1, wherein a cross-linking agent provides the attachment of the biomaterial to itself.

3. The implantable valve of claim 1, wherein an adhesive provides the attachment of the biomaterial to itself.

4. The implantable valve of claim 1, wherein welding provides the attachment of the biomaterial to itself.

5. The implantable valve of claim 4, wherein a heat source provides the weld that attaches the biomaterial to itself.

6. The implantable valve of claim 1, wherein the application of pressure provides the attachment of the biomaterial to itself.

7. An implantable valve prosthesis, comprising:

a support frame supporting one or more leaflets, each comprising a biomaterial, the one or more leaflets including a body, an inner edge, and an outer edge;

wherein the support frame and the one or more leaflets together functional as a valve to restrict blood flow in a first direction when implanted in the vascular vessel; and

wherein the leaflet outer edge is folded over the support frame with the outer edge or portion adjacent thereto being attached to the leaflet body by a non-suturing method that include at least one of the group consisting of cross-linking agents, adhesives, pressure welding, crimping, and heat welding, thereby securing the one or more leaflets to the support frame.

8. The implantable valve of claim 7, wherein the method includes heat to attach the biomaterial to itself

9. The implantable valve of claim 7, wherein the method includes pressure to attach the biomaterial to itself.

10. An implantable vascular valve, comprising:

a support frame;

one or more leaflets comprised of biomaterial attached to the support frame and configured to function as a valve; and

wherein the biomaterial is wrapped around the support frame and welded to itself, thereby securing the one or more leaflets to the support frame.

11. An implantable vascular valve, comprising:

a support frame;

one or more leaflets comprised of biomaterial attached to the support frame and configured to function as a valve; and

wherein the biomaterial is wrapped around the support frame and affixed to itself using an adhesive, thereby securing the one or more leaflets to the support frame.

12. An implantable vascular valve, comprising:

a support frame;

one or more leaflets comprised of biomaterial attached to the support frame and configured to function as a valve; and

wherein the biomaterial is wrapped around the support frame and affixed to itself using the application of pressure, thereby securing the one or more leaflets to the support frame.

13. An expandable implantable vascular valve, comprising:

a support frame having a wall-engaging outer edge;

one or more leaflets comprised of biomaterial attached to the support frame and configured to function as a valve; and

wherein the outer wall-engaging edge of the support frame is enclosed by at two layers of the biomaterial attached to one another by a non-suturing method that include at least one of the group consisting of cross-linking agents, adhesives, pressure welding, crimping, and heat welding, thereby securing the one or more leaflets to the support frame.